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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/976,591

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Tao Chen

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QUALCOMM INCORPORATED
5775 MOREHOUSE DR.
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EXAMINER

HOM, SHICK C

ART UNIT

PAPER NUMBER

2616

NOTIFICATION DATE

DELIVERY MODE

08/04/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 09/976,591	Applicant(s) CHEN ET AL.	
	Examiner SHICK C. HOM	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7, 8, 11, 13-18, 20-32, 34, 36-47 and 49-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8, 11, 13-18, 20-25, 36-47 and 49-54 is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 26-32, 34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/8/2008 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1-5, 7-8, 11, 13-18, 20-32, 34, 36-47, and 49-54 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at

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the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-5, 7, 26-32, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jeong et al. (2002/0080887) in view of Christopher et al. (5,351,087).

Regarding claims 1, 4-5, 7, 26, and 31-32:

Jeong et al. disclose the encoding method for reducing decoding complexity, the method comprising: encoding systematic bits of a bit stream in each of a plurality of buffers with a first code, the first code being an outer code; interleaving

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content of the plurality of buffers from the bit stream; and encoding said interleaved content with a second code to provide a set of frames, wherein the encoding said interleaved content comprises identifying a block of bits to be encoded and then coding the block of bits with the second code, the second code being an inner code (the abstract recite an outer coding unit for performing a first encoding, thereby generating an outer encoded signal; an outer interleaving unit for performing interleaving of the outer encoded signal a byte by byte basis, thereby generating an outer interleaved signal; an inner coding unit for performing a second encoding the outer interleaved signal, thereby generating an inner encoded signal and paragraph 0061 recite the FIFO register clearly anticipate the first and second code and the buffer as claimed).

Regarding claims 2-3 and 29-30:

Jeong et al. disclose wherein said encoding systematic bits in each of the plurality of buffers with a block code and with a Reed-Solomon code (paragraph 0056 recite the use of Reed-Solomon block coding).

Regarding claims 27-28:

Jeong et al. disclose wherein each of said plurality of buffers is configured to store systematic bits and parity bits and wherein each of said plurality of encoders is configured to

encode systematic bits to provide parity bits (paragraph 0095 recite the parity bits as claimed).

Jeong et al. disclose all the subject matter of the claimed invention with the exception of wherein the interleaver being a multiplexer and a block of bits received from said multiplexer as recited in claims 1, 26, 34.

Christopher et al. from the same or similar fields of endeavor teach that it is known to provide wherein the interleaver being a multiplexer (the abstract recite the multiplexer being used to interleave signals).

Thus, it would have been obvious to the person having ordinary skill in the art at the time the invention was made to provide wherein the interleaver is a multiplexer as taught by Christopher et al. in the apparatus and method of Jeong et al.

The interleaver being a multiplexer can be implemented by substituting the multiplexer of Christopher et al. for the interleaver of Jeong et al. The motivation for substituting the multiplexer as taught by Christopher et al. in the apparatus and method of Jeong et al. being that it provides a well-known mean and method of interleaving signals in Jeong et al.

Allowable Subject Matter

5. Claims 8, 11, 13-18, 20-25, 36-47, 49-54 are allowed.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Salvi et al. disclose a method and apparatus for coding bits of data in parallel.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHICK C. HOM whose telephone number is (571)272-3173. The examiner can normally be reached on Mon-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pham Chi can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Chi H Pham/
Supervisory Patent
Examiner, Art Unit 2616
7/29/08

SH